

## INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/JP2004/016481

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 B01J35/00 B01J21/02 B01J21/06 C09D1/00 C09C1/36  
C03C17/25

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01J C09D C09C C03C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 153 999 A (SHOWA DENKO KABUSHIKI KAISHA) 14 November 2001 (2001-11-14) page 1, line 47 – page 5, line 20 page 5, line 56 – page 6, line 8; example 5 ----- US 2003/181329 A1 (TANAKA JUN ET AL) 25 September 2003 (2003-09-25) page 7, paragraph 128 – paragraph 132 page 8, paragraph 138 – paragraph 139 page 12, paragraph 194 – paragraph 198 page 14, paragraph 221 – paragraph 225 page 15, paragraph 241 – paragraph 243; examples 2-4 ----- -/-	1-12, 23, 24
A		1-24



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the International filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the International search

16 February 2005

Date of mailing of the International search report

01/03/2005

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	WO 2004/014986 A (SHOWA DENKO K. K; SANBAYASHI, MASAYUKI; TANAKA, JUN) 19 February 2004 (2004-02-19) page 10, line 9 - page 16, line 19 page 17, line 26 - page 19, line 22 page 23, line 16 - line 37; examples 3,9-12 -----	1-24

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## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: **partially 1-5** because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: partially 1-5

Present independent claim 1 relates to an extremely large number of possible composition. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compositions claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been carried out for those parts of the claims which appear to be supported and disclosed, namely those parts relating to the compositions of claim 1 in which the photocatalytic particles are those particles disclosed in claim 6, their preparation and use.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/JP2004/016481

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 1153999	A	14-11-2001	AU EP WO US	7450400 A 1153999 A1 0123483 A1 6479141 B1		30-04-2001 14-11-2001 05-04-2001 12-11-2002
US 2003181329	A1	25-09-2003	US AU CA CN CN EP EP EP WO WO WO US US US US JP	2004067849 A1 2002361085 A1 2436747 A1 1481279 T 1483002 T 1354628 A1 1354854 A1 1462169 A1 02053285 A1 02053501 A1 03053576 A1 2002187338 A1 2002160910 A1 2004171484 A1 2005027039 A1 2004243307 A		08-04-2004 09-07-2003 11-07-2002 10-03-2004 17-03-2004 22-10-2003 22-10-2003 29-09-2004 11-07-2002 11-07-2002 03-07-2003 12-12-2002 31-10-2002 02-09-2004 03-02-2005 02-09-2004
WO 2004014986	A	19-02-2004	WO JP	2004014986 A1 2004244608 A		19-02-2004 02-09-2004